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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER	
HAN, CLEMENCE S	
ART UNIT	PAPER NUMBER
2616	

DATE MAILED: 08/25/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/621,257	SREEMANTHULA ET AL.	
	Examiner	Art Unit	
	Clemence Han	2616	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *29 June 2006*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-21* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-14 and 16-21* is/are rejected.

7)☒ Claim(s) *15* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 112

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claim 1-13, 18 and 21 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

3. Claim 1 recites the limitation "the sender protocol layer" in line 6. There is insufficient antecedent basis for this limitation in the claim.

4. Regarding claim 1, it is unclear whether a method or an apparatus is claimed.

5. Claim 3 recites the limitation "the congestion window value" in line 5-6. There is insufficient antecedent basis for this limitation in the claim.

6. The term "or a variant" in claim 8 is a relative term which renders the claim indefinite. The term "a variant" is not defined by the claim, the specification does not provide a standard for ascertaining the requisite degree,

and one of ordinary skill in the art would not be reasonably apprised of the scope of the invention.

7. Claim 9 recites the limitation "the predetermined rate" in line 3-4. There is insufficient antecedent basis for this limitation in the claim.

8. Claim 9 recites the limitation "the rate" in line 5. There is insufficient antecedent basis for this limitation in the claim. It is not clear whether it is referring to "the data transmission rate" or "the predetermined rate".

9. The term "standard congestion principles" in claim 9 is a relative term which renders the claim indefinite. The term "standard congestion principles" is not defined by the claim, the specification does not provide a standard for ascertaining the requisite degree, and one of ordinary skill in the art would not be reasonably apprised of the scope of the invention.

10. Regarding claim 18, it is unclear whether a method or an apparatus is claimed.

11. Claim 21 recites the limitation "the telecommunication device" in line 7-8. There is insufficient antecedent basis for this limitation in the claim.

Claim Rejections - 35 USC § 102

12. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

13. Claim 1, 4, 14 and 16-20 are rejected under 35 U.S.C. 102(e) as being anticipated by Yanagihara et al. (US Pub. 2003/0152032).

Regarding to claim 1, Yanagihara teaches a method, comprising: the sender protocol layer of a sender transmitting segments at a rate of transmission and increasing the rate of transmission (S31 in Figure 7) based on feedback the sender receives from a receiver (RR in Figure 1); the sender receiving a message including one or more bits set to convey an indication of low congestion (RR, see Figure 5); and the sender, in response to the indication of low congestion (S23 in Figure 7), increasing the data transmission rate so as to achieve increased throughput (S31 in Figure 7).

Regarding to claim 4, Yanagihara teaches the protocol layer is a transport layer of real time control protocol layer or other streaming or datagram protocol [0009].

Regarding to claim 14, Yanagihara teaches a telecommunication device comprising: a protocol layer for sending and receiving segments, for transmitting segments at a rate of transmission and increasing the rate of transmission (S31 in Figure 7) based on acknowledgements indicating successful receipt of the segments (RR in Figure 1), for receiving a message including one or more bits set to convey an indication of low congestion (RR, see Figure 5), and, in response to the indication of low congestion (S23 in Figure 7), for increasing the data transmission rate so as to achieve increased throughput (S31 in Figure 7).

Regarding to claim 16, Yanagihara teaches a telecommunication system, comprising a plurality of intermediate nodes and also a plurality of telecommunication devices, wherein at least one of the telecommunication devices includes a protocol layer for sending and receiving segments, wherein: the protocol layer is configured to transmit segments at a rate of transmission and to increase the rate of transmission (S31 in Figure 7) based on acknowledgements indicating successful receipt of the segments (RR in Figure 1); the telecommunications device is configured to receive a message including one or more bits set to convey an indication of low congestion (RR, see Figure

5); and the telecommunication device is configured to increase the data transmission rate so as to achieve increased throughput (S31 in Figure 7) in response to the indication of low congestion (S23 in Figure 7).

Regarding to claim 17, Yanagihara teaches a computer program product comprising: a computer readable storage structure embodying computer program code thereon for execution by a computer processor in a telecommunication device having a protocol layer for sending and receiving segments, with said computer program code including instructions for: the protocol layer transmitting segments at a rate of transmission and increasing the rate of transmission (S31 in Figure 7) based on acknowledgements the sender receives from the receiver (RR in Figure 1); the telecommunication device receiving a message including one or more bits set to convey an indication of low congestion (RR, see Figure 5); and in response to the indication of low congestion (S23 in Figure 7), the telecommunication device increasing the data transmission rate so as to achieve increased throughput (S31 in Figure 7).

Regarding to claim 18, Yanagihara teaches a method, comprising: a telecommunication device performing a process of congestion detection for

communication with another telecommunication device (Figure 1); and a protocol layer of the telecommunication device transmitting to the other telecommunication device a message including one or more bits set to convey an indication of low congestion (S23 in Figure 7).

Regarding to claim 19, Yanagihara teaches an apparatus, comprising: means for transmitting segments at a rate of transmission and increasing the rate of transmission (S31 in Figure 7) based on feedback from a communication device (RR in Figure 1); and means for increasing the rate of transmission so as to achieve increased throughput (S31 in Figure 7) in response to a message including one or more bits set to convey an indication of low congestion (RR, see Figure 5).

Regarding to claim 20, Yanagihara teaches an apparatus, comprising: a protocol layer, for transmitting segments at a rate of transmission and increasing the rate of transmission (S31 in Figure 7) based on feedback from a communication device (RR in Figure 1), and for increasing the rate of transmission so as to achieve increased throughput (S31 in Figure 7) in response

to a message including one or more bits set to convey an indication of low congestion (RR, see Figure 5).

Claim Rejections - 35 USC § 103

14. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

15. Claim 2 and 5-8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yanagihara et al..

Regarding to claim 2 and 5-8, Yanagihara teaches a method, comprising: the sender protocol layer of a sender transmitting segments at a rate of transmission and increasing the rate of transmission (S31 in Figure 7) based on feedback the sender receives from a receiver (RR in Figure 1); the sender receiving a message including one or more bits set to convey an indication of low congestion (RR, see Figure 5); and the sender, in response to the indication of low congestion (S23 in Figure 7), increasing the data transmission rate so as to achieve increased throughput (S31 in Figure 7). Yanagihara, however, does not teach the protocol as TCP or the method used in specific network like RAN, EGPRS, GPRS, UMTS or CDMA. The congestion control in those protocol and

networks are well known in the art. It would have been obvious to one skilled in the art to modify Yanagihara to be used in different protocol or different network as well known in the art in order to optimize transfer rate in different protocol or different network.

Response to Arguments

16. Applicant's arguments filed June 29, 2006 have been fully considered but they are not persuasive. In response to pages 8-11, the applicant argues that Yanagihara does not teach one or more bits set to convey an indication of low congestion. Yanagihara teaches one or more bits (bits in RR in Figure 5) set to convey an indication of congestion (last sentence of Abstract, [0067]). Those bits are also an indication of low congestion ("congestion is extremely slight" in [0096]). Therefore, the examiner contends that the one or more bits in RR conveys the indication of congestion.

Allowable Subject Matter

17. Claim 15 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

18. Claim 3, 9-13 and 21 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

Conclusion

19. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. The following patents are cited to further show the state of the art with respect to the invention in general.

U.S. Patent 6,512,743 to Fang

U.S. Patent 6,996,626 to Smith

U.S. Pub. 2003/0135638 to Brabson et al.

U.S. Pub. 2006/0026004 to Van Nieuwenhuizen

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Clemence Han whose telephone number is (571) 272-3158. The examiner can normally be reached on Monday-Thursday 7 - 5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Huy Vu can be reached on (571) 272-3155. The fax

phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

C.H.

Clemence Han
Examiner
Art Unit 2616

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SUPERVISORY PATENT EXAMINER
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